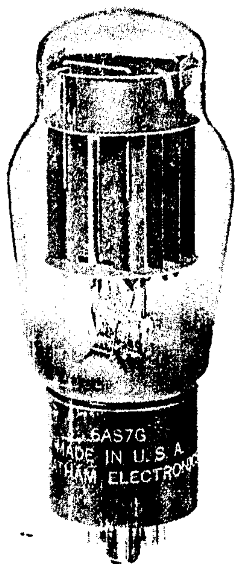
CHATHAM ELECTRONICS CORPORATION

6AS7G

LOW-MU TWIN POWER TRIODE

Chatham 6AS7G is a low-mu, high perveance, twin power triode of the heater-cathode type intended for use as a regulator tube in dc power supply units, and in projection television booster scanning applications where pulsed plate voltages of high value are encountered.



The Chatham 6AS7G features triode balance within ±10% at rated current, very low microphonics, absence of grid emission and greatly reduced plate current drift.

GENERAL DATA

Heater, for Unipotential Cathodes:		
Voltage (AC or DC)	6.3 ±10%	volts
Current at 6.3 volts	2.5	amp
Direct Interelectrode Capacitances (Each Unit, without external shield):		
Grid to Plate	8.4	uuf
Input	6.2	uuf
Output	2.2	uuf
Heater to Cathode:		
Triode Unit No.1	6.5	uuf
Triode Unit No.2	6.1	uuf
Grid of Unit No.1 to Grid of Unit No.2	0.50	uuf
Plate of Unit No.1 to Plate of Unit No.2	2.20	uuf

CHARACTERISTICS (Each Unit):

Plate-Supply Voltage	135	volts
Cathode-Bias Resistor	250	ohms
Amplification Factor	2	
Plate Resistance	280	ohms
Transconductance	7000	umhos
Plate Current	125	ma

MECHANICAL:

Mounting Position	Any
Maximum Overall Length	5.32"
Maximum Seated Length	4.77"
Maximum Diameter	2.0"
Bulb	ST-16
Base	Medium Shell Octal 8 Pin

DC AMPLIFIER

Values are for Each Unit

MAXIMUM RATINGS, *Absolute Values:*

Plate Voltage	250 max.	volts
Plate Current	125 max.	ma
Plate Dissipation	13 max.	watts
Peak Heater-Cathode Voltage:		
Heater negative with respect to cathode	300 max.	volts
Heater positive with respect to cathode	300 max.	volts
Bulb Temperature ⊕	200 max.	°C

MAXIMUM CIRCUIT VALUES:

Grid-Circuit Resistance:		
For cathode-bias operation	1.0 max.	megohm
For fixed-bias operation □	0.1 max.	megohm
For combined fixed- and cathode-bias operation *	0.1 max.	megohm

BOOSTER SCANNING SERVICE

Values are for Each Unit

MAXIMUM RATINGS, *Absolute Values:*

For operation in a 525-line, 30-frame system ▲

Peak Negative-Pulse Plate Voltage ●	3000 max.	volts
Peak Negative-Pulse Grid Voltage	2300 max.	volts
DC Plate Current	125 max.	ma
Plate Dissipation	13 max.	watts
Peak Heater-Cathode Voltage:		
Heater negative with respect to cathode ◈	300 max.	volts
Heater positive with respect to cathode	300 max.	volts
Bulb Temperature ⊕	200 max.	°C

MAXIMUM CIRCUIT VALUES (for maximum rated conditions):

Grid-Circuit Resistance:		
For cathode-bias operation	1.0 max.	megohm
For fixed-bias operation	not recommended	

CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

	Note	Min.	Max.	
Heater Current	1	2.26	2.74	amp
Grid-Plate Capacitance (Each Unit)	-	6.9	9.9	uuf
Input Capacitance (Each Unit)	-	4.7	7.7	uuf
Output Capacitance (Each Unit)	-	1.7	2.7	uuf
Heater-Cathode Capacitance:				
Triode Unit No. 1	-	4.5	8.5	uuf
Triode Unit No. 2	-	4.1	8.1	uuf
Amplification Factor (Each Unit)	1,2	1.4	2.6	
Plate Current (Each Unit)	1,2	100	150	ma
Transconductance (Each Unit)	1,2	5800	8200	umhos
Reverse Grid Current (Each Unit)	1,3	-	2.5	uamp

Note 1: With 6.3 volts ac or dc on heater.

Note 2: With plate-supply voltage of 135 volts, and cathode-bias resistor of 250 ohms in each cathode (both triode units operating).

Note 3: With plate-supply voltage of 135 volts, and grid resistor of 1 megohm in each grid (both triode units operating).

March 3, 1954

° At hottest point on bulb surface.

□ When fixed bias is used, the plate circuit should contain a protective resistance to provide a minimum drop of 15 volts dc at the normal operating conditions.

* When combined fixed-and cathode-bias is used, the cathode-bias portion should have a minimum value of 7.5 volts dc at the normal operating conditions.

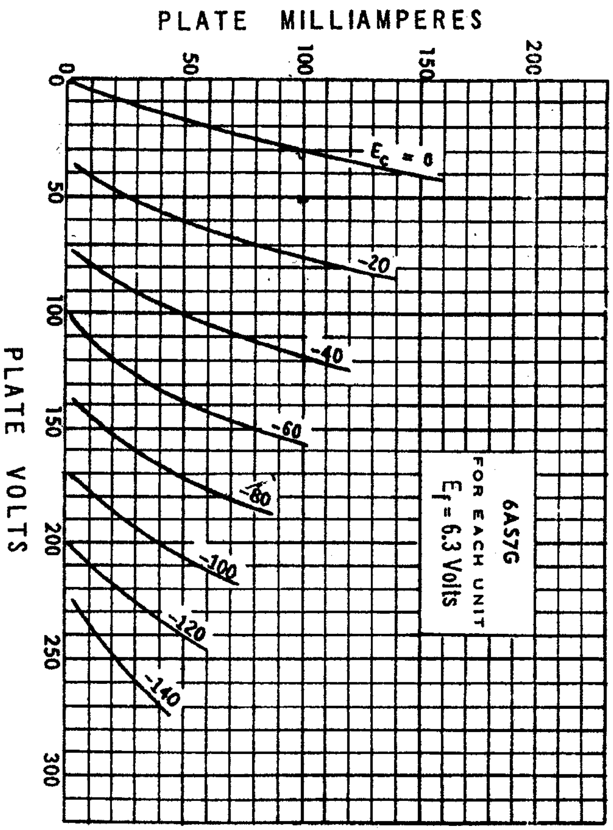
▲ As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.

● The duration of the voltage pulse must not exceed 15 per cent of one horizontal scanning cycle. In a 525- line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.

◈ Operation of this tube is not recommended with a damper pulse between heater and cathode.

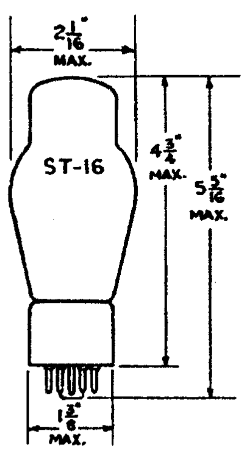
OPERATING NOTES

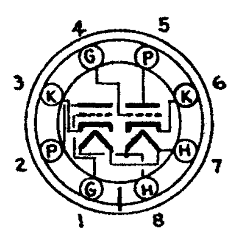
The ***maximum ratings*** in the tabulated data for the 6AS7G are limiting values above which the serviceability of the 6AS7G may be impaired from the viewpoint of life and satisfactory performance. Therefore, in order not to exceed these absolute ratings, the equipment designer has the responsibility of determining an average design value for each rating below the absolute value of that rating by an amount such that the absolute values will never be exceeded under any usual condition of supply-voltage variation, load variation, or manufacturing variation in the equipment itself.



Average Plate Characteristics For Each Triode Unit of Type 6AS7G

DIMENSIONAL OUTLINE





BOTTOM VIEW

MEDIUM SHELL

8 PIN OCTAL